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(54) Recording or replay device for recording on or replaying from an optical recording medium

(57) The invention relates to a device for corrected-focus scanning of information while recording on and/or replaying information from a recording medium and is based on a radiation source which provides a scanning beam, a focusing objective lens and a radiation-sensitive detector system. A diffraction element for deriving a focus error signal is arranged in the space between the focusing objective lens and the detector system, at a

predetermined, fixed distance, the diffraction element being designed such that two focus planes result which are physically separated from one another. The detector system is located between the separate focus planes such that the size ratios, which change in the event of defocusing, of the symmetrically imaged focus spot can be used to derive the focus error signal.

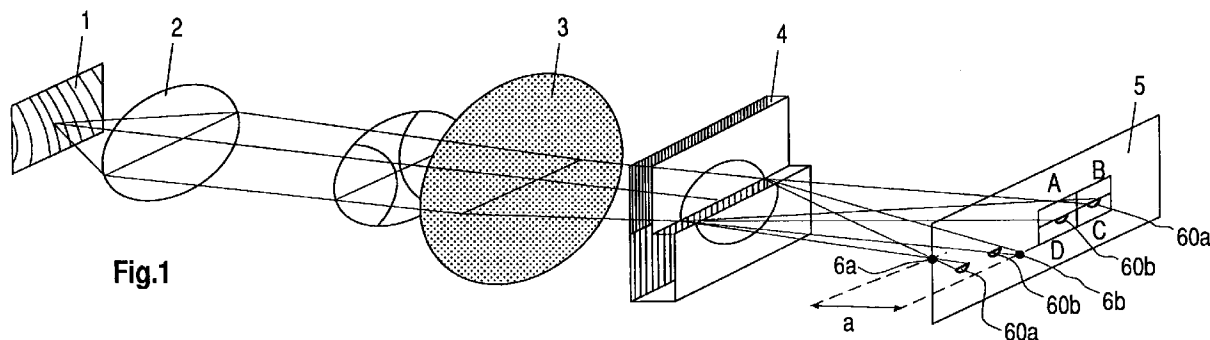


Fig.1

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EUROPEAN SEARCH REPORT

Application Number
EP 97 11 5762

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US 5 015 835 A (OHUCHIDA SHIGERU ET AL) 14 May 1991	1,5-7	G11B7/135
Y	* column 9, line 10 - column 12, line 50 *	8	G11B7/09
A	* column 23, line 35 - column 24, line 20; figures 3-20 *	2,3,11	G11B7/13

Y	US 5 315 574 A (SAIMI TETSUO ET AL) 24 May 1994	8	
A	* column 5, line 59 - column 6, line 5; figure 8C *	1,5-7,11	

X	EP 0 452 793 A (MATSUSHITA ELECTRIC IND CO LTD) 23 October 1991	1,5,6	
A	* abstract * * page 6, line 22 - page 7, line 8; figures 11,12 *	4	

X	US 5 351 230 A (TAKEDA TADASHI ET AL) 27 September 1994	1,5	
A	* abstract * * column 6, line 41 - column 8, line 60; figures 1,2 *	4	

P,X	WO 97 23871 A (PHILIPS ELECTRONICS NV ;PHILIPS NORDEN AB (SE)) 3 July 1997 * page 7, line 29 - page 8, line 22; figures 1,3 *	1,5,6	G11B

A	US 5 060 212 A (FUJITA KAZUHIRO ET AL) 22 October 1991 * column 15, line 12 - column 16, line 3; figure 23 *		

The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
MUNICH		17 September 1998	Moje, A
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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